

# İläçäüò ÃñPãĩñçò Âêêßícóçò ôĩö FreeBSD ãéá × ñPóôåò Linux®

John Ferrell

\$FreeBSD: release/8.4.0/el\_GR.ISO8859-7/articles/linux-users/article.xml 39632  
2012-10-01 11:56:00Z gabor \$

ĐiãõĩãôééÜ Äééãépiãôá © 2008 Ç İiÜää ÔãèìçñBùóçò ôĩö FreeBSD  
\$FreeBSD: release/8.4.0/el\_GR.ISO8859-7/articles/linux-users/article.xml 39632  
2012-10-01 11:56:00Z gabor \$

Ôĩ FreeBSD âßiáé Yía éãõĩ÷õñüiYĩĩ àiðĩñééü öýĩãĩēĩ ôĩö FreeBSD Foundation.  
Ôĩ Linux âßiáé Yía éãõĩ÷õñüiYía àiðĩñééü öýĩãĩēĩ ôĩö Linus Torvalds óóéò ÇiüiYĩãò Đĩēéôãßãò.  
İé ēYĩãéò Intel, Celeron, EtherExpress, i386, i486, Itanium, Pentium, éáé Xeon âßiáé àiðĩñééÜ öýĩãĩēã P  
éãõĩ÷õñüiYía àiðĩñééÜ öýĩãĩēã ôçò Intel Corporation éáé ôüi ēõããõñéēpi ôçò óóéò ÇiüiYĩãò Đĩēéôãßãò  
éáé óã Üēēãò ÷pñãò.  
İé ēYĩãéò P õñÜóãéò Red Hat, éáé RPM âßiáé àiðĩñééÜ öýĩãĩēã P éãõĩ÷õñüiYía àiðĩñééÜ öýĩãĩēã ôçò  
Red Hat, Inc. óóéò ÇiüiYĩãò Đĩēéôãßãò éáé óã Üēēãò ÷pñãò.  
Ç ēYĩç UNIX âßiáé éãõĩ÷õñüiYĩĩ àiðĩñééü öýĩãĩēĩ ôĩö Open Group óóéò ÇiüiYĩãò Đĩēéôãßãò éáé óã  
Üēēãò ÷pñãò.  
ĐĩēēYò áðü óéò ēYĩãéò P õñÜóãéò İē İðĩßãò ÷ñçóēiİðĩēĩYĩóáé áðü ôĩöò éãóáóēããóóôYò P ôĩöò  
ðüēçôYò ôĩöò ãéá İá ãéãēñBĩĩōĩ óã ðñĩüüiöá ôĩöò ēãüñĩYĩóáé àiðĩñééÜ öýĩãĩēã. ¼ðĩö áðôYò  
àiðãĩßæĩiöáé óã áðôü ôĩ ēãßiãĩĩ éáé ãéá üóãò áðü áðôYò ãĩüñßæãé ç İiÜää ÄĩÜðôðĩçò ôĩö FreeBSD üóé  
âßiáé ðééãĩüi İá âßiáé àiðĩñééÜ öýĩãĩēã, éã ããßôã Yía áðü óã öýĩãĩēã: “™” P “®”.

Ôĩ ēãßiãĩĩ áðôü Y÷ãé óēiðü İá ãĩçèPóãé óçç ãñPãĩñç ãñĩēēãßüóç ÷ñçóðpi Linux® İYĩōĩö / ðñĩ÷÷üñçĩYĩĩö  
ãðéðYĩĩö İã ðéò áãóéēYò Yĩñĩãò ôĩö FreeBSD

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1 Å é ó á ã ù ã ¢

Οι εαβλαίη άόδου οίηβææέ όέό æεάοιηÝò ιάόάίý οίò FreeBSD εάέ οίò Linux þóόά ιÝοίε þ ðñí÷÷ùñçιÝííε ÷ ñþóόάό οίò  
 Linux íά ιόñíñýí ãñþáíñά íά ðñíóáñííóόίýí όόέό ááόέéÝò Ýííέάό οίò FreeBSD. Ðñùέæέόάé áéά ιéά όá÷÷íéþ æέόάüáþ  
 όóí FreeBSD, εάέ ááí éά áíάόáñεñýíá όά όó÷÷ι “όέέίόíόέéÝò” æέάοιηÝò ιάόάίý όüí áýí όόόόçιÝòüí.

Oĩ eãñĩãĩĩ aóõũ õđĩeYóãe uóe Y ÷ ãõã Þäç ããeãóãóóÞóãe õĩ FreeBSD. Áĩ äãĩ Y ÷ ãõã ããeãóãóóÞóãe õĩ FreeBSD Þ ÷ ñãeÜëãóõã ãĩÞeãeãã ãã ãĩ äeããeãeãóãã ããeãóÜõóãóóç õĩõ, ðãñãeãeĩyĩã ãã äeããÜõãõã õĩ eãõÜeãeĩ Äãeãeãeãóõĩãõã õĩ FreeBSD ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/install.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/install.html)) óõĩ Äã ÷ äeñĩãeĩ õĩõ FreeBSD.

## 2 Êâëýöç: Ääí õđŮñ÷âé Bash;

[illegible][illegible]

### 3 ĐáêÝôá êáé Ports: ĐñĩôéÝôĩĩôáò ěĩăéóĩéēũ óôĩ FreeBSD

Ἄεθου ἀδὺ ὄγι θανάτιοεἰεἰβ Ἰεῖται ἡεἰάοῦόοάοοδ εἰεἰεἰεἰεἰ οἰο UNIX® (εἰάῖῖῖῖῖ οἰο δῖῖῖῖῖ εἰεἰεἰεἰ, ἀδῖοἰῖῖῖῖ οἰο ἡἡ ÷ ἡῖῖ, ἡῖῖῖῖῖῖῖῖ ἡἡ ἡῖῖῖῖῖῖῖῖ), οἰ FreeBSD ῖῖῖῖῖῖ ἡἡ ἡῖῖῖ ἡῖῖῖῖῖ ἡἡ ὄγι ἡῖῖῖῖῖῖ ὄῖῖῖῖῖῖ: ὄῖ ῖῖῖῖῖ ἡἡ ὄῖ ports. ἡἡ ἡἡ ῖῖῖῖ ῖῖῖῖ ῖῖῖ ὄῖ ἡῖῖῖῖῖῖ ῖῖῖῖῖ ῖῖῖῖῖ ἡἡ ports, ἡῖῖῖ ἡῖῖ (<http://www.freebsd.org/ports/master-index.html>).

### 3.1 ĐấêÝôá

Όά θαέΎόά αβίαέ θñĩ-iaóaaèuóóéoiΎíáo áóáñĩāΎó, èá èΎāñāi ôĩ áíóβóóíé÷ĩ áéá ôĩ FreeBSD òuĩ āñ÷āβuĩ .deb óá óóóóβiaóá Debian/Ubuntu éáé òuĩ āñ÷āβuĩ .rpm óá óóóóβiaóá Red Hat/Fedora. Όά θαέΎόά āāēāēβóóáíóáé ÷ñóóēñíēíβíóáo óci áíóēβ pkg\_add(1). Άéá θánŨāēēāi, ç āēuēĩōèç áíóēēP āāēāēéóóŨ ôĩñ **Apache 2.2**:

```
# pkg_add /tmp/apache-2.2.6_2.tbz
```

Ç ÷ ñΠός όçò ðáñáíÝíññíð -r ïäçããß ðçí pkg\_add(1) íá éáóääÜóää áðòùíáðá ðùóí ðí ðáéÝðí, ùóí éáé ðéð áíáñðΠóáéð ðíð. éáé íá ðí ääéáðáóðΠóáé:

```
# pkg_add -r apache22
```

```
Fetching ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6.2-release/Latest/apache22.tbz... Do
```

```

Fetching ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6.2-release/All/expat-2.0.0_1.tbz...
Fetching ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6.2-release/All/perl-5.8.8_1.tbz... D
[snip]

```

To run apache www server from startup, add `apache22_enable="YES"` in your `/etc/rc.conf`. Extra options can be found in startup script.

**Όγιβαύος:** Άί ÷ η̇σ̇οεί̇ι̇δι̇εά̇βοά̇ ιεά̇ “ά̇δ̇βο̇ς̇ι̇ç” Ψε̇α̇ι̇ος̇ ο̇ι̇ο̇ FreeBSD (6.2, 6.3, 7.0, εε̇δ̇. δι̇ο̇ α̇α̇ι̇ε̇ε̇Ü̇ ι̇δι̇η̇α̇βο̇α̇ ι̇ά̇ α̇α̇ε̇α̇ο̇ά̇ο̇Π̇ο̇ά̇ο̇α̇ α̇δ̇Ü̇ CD-ROM) ç̇ α̇ι̇ο̇ι̇ε̇Π̇ pkg\_add -r ε̇ά̇ ε̇ά̇ο̇α̇α̇Ü̇ο̇ά̇ε̇ ο̇ά̇ δ̇α̇ε̇Υ̇ο̇ά̇ δι̇ο̇ ο̇δ̇ε̇Ü̇÷̇ ο̇ç̇ε̇ά̇ι̇ α̇ε̇ά̇ α̇δ̇ο̇Π̇ ο̇ç̇ ο̇α̇α̇ε̇α̇η̇ε̇ι̇Υ̇ι̇ç Ψε̇α̇ι̇ος̇. Ο̇ά̇ δ̇α̇ε̇Υ̇ο̇ά̇ α̇δ̇ο̇Ü̇ *Βού̇δ̇ α̇α̇ι̇ δ̇α̇η̇ε̇Υ̇÷̇ ι̇ο̇ι̇* ο̇ε̇δ̇ δ̇ε̇Υ̇ι̇ι̇ ο̇α̇ε̇α̇ο̇δ̇α̇β̇α̇δ̇ α̇ε̇α̇Ü̇ο̇ά̇ε̇δ̇ ο̇υ̇ι̇ α̇δ̇α̇η̇ι̇α̇Π̇ι̇. ι̇δι̇η̇α̇βο̇α̇ ι̇ά̇ ÷̇ η̇σ̇οεί̇ι̇δι̇ε̇Π̇ο̇ά̇ο̇α̇ ο̇ç̇ι̇ ι̇ά̇ο̇ά̇α̇ε̇ç̇ο̇Π̇ δ̇α̇η̇ε̇ά̇Ü̇ε̇ε̇ι̇ο̇ι̇δ̇ο̇ [PACKAGESITE](#) α̇ε̇ά̇ ι̇ά̇ δ̇α̇η̇ά̇ε̇Ü̇ι̇ο̇ά̇α̇ α̇δ̇ο̇Π̇ ο̇ç̇ι̇ δ̇η̇ι̇α̇δ̇ε̇ε̇α̇α̇ι̇Υ̇ι̇ç ο̇ο̇ι̇δ̇α̇η̇ε̇ο̇ι̇η̇Ü̇. Α̇ε̇ά̇ δ̇α̇η̇Ü̇α̇α̇ε̇α̇ι̇ά̇, ε̇Υ̇ο̇ι̇ι̇ο̇ά̇ ο̇ç̇ι̇ [PACKAGESITE](#) ο̇όç̇ι̇ ο̇ε̇ι̇Π̇ <ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6-stable/Latest/> ε̇ά̇ ε̇ά̇ο̇α̇ȧÜ̇ο̇ά̇ο̇α̇ ο̇ά̇ δ̇ε̇ι̇ δ̇η̇Ü̇ο̇ό̇ά̇ δ̇α̇ε̇Υ̇ο̇ά̇ δι̇ο̇ δ̇δ̇Ü̇η̇÷̇ ι̇ο̇ι̇ α̇ε̇ά̇ ο̇ç̇ ο̇ά̇ε̇η̇Ü̇ 6.X.

Άέά δάνέοούοάναό δέçñïŕñßåð ó÷:âôééÛ ìâ ôá δάéÝôá, δάνάέάēÿîâ äéääÛôðâ ôçí áñúðçóá 4.4 ôîí Åã÷:áénßäēí ôïŕ  
FreeBSD: ×ñçóéíîðîépíðáð ôî Óýóðçíá Packages  
([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/packages-using.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/packages-using.html)).

### 3.2 Ports

Ç ääýðäñç Ýíëäüð äéä öçí ääéäüÜððäðç äðäññäðí öðí FreeBSD äßíáç ç Óðëëäð ðüí Ports. Ç Óðëëäð ðüí Ports äßíáç Ýíá ðéäßðéí éäëöíðñäëðí ðñð äðñðäéäßðäé äðñ Makefiles éäé äñ÷äßä äéäöíñðí (patches) ðä íðñßä Ý÷íðí äçíëíðñäçäß äéäéëÜ, þððä íá äßíáç äñíäð Ç ääéäüÜððäðç äéÜöíññü äðäññäðí öðí FreeBSD äðñ öñ ðçääßí ëðäééä öñðð. ¼ðäí ääéäéëöðÜðä Ýíá port, öí öýððçíä éä éäðääÜðäé öñ ðçääßí ëðäééä, éä äðäññüðäé üéäð ðéð äðäéöýíñäíäð äééääÝð ÷ñçöñíðñëðíðäð öä patches, éä íäðääëñððßðäé öñ ëðäééä, éäé öÝëíð éä ääéäðäðððäé öçí äðäññäð. Èä äëëëíðððäé öçí ßäéä äéääééäðßä éäé äéä íðñéääððñðä ðð÷í äñäñðñíäíä ðñññÜñíäðä.

[illegible]

Ç äâëäôÛóóäóç áíüò port äßíáé äáíééÛ öüóí äðëP üóí ôí íá áéóÝëäôä öüíí éäôÛëíäí öüö éäé íá íäëéíPóäôä öçí äéäééäóßá íäöääëpöóéöçð. Öüí äéüëíöëí ðáñÛääëäíä äßíäöäé ääëäôÛóóäóç öüö **Apache 2.2** äðü öçí ÖöëëíäP öüí Ports:

```
# cd /usr/ports/www/apache22
# make install clean
```

Já óçíáíóééü ðéäñÝéðçíá òçð ÷ ñÞóçð ports óòçí áäéáðÜóóáóç ëíäéóíééíý áßíáé ç ééáíuòçóá ðñíóáñíüäÞò òuí áðééäíáí  
 áäéáðÜóóáóçð. Áéá ðáñÜáäéäíá, üóáí áäéáééóðÜóá òíí **Apache 2.2** áðu óá ports íðñíáßóá íá áíáñäíðíéÞóáòá óçí  
 áðééäíáÞ **mod\_ldap** èÝòñíóáó áðéðò óéíÞ óóç íàðáäéçðÞ **WITH\_LDAP** òíð **make(1)**:

```
# cd /usr/ports/www/apache22
# make WITH_LDAP="YES" install clean
```

ÀéááÜôâ ôçí áíúôçôá 4.5 ôïð Åã÷ãéñéãßïð ôïð FreeBSD, ×ñçóéïïðíéðíôáð ôçí Ports Collection ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/ports-using.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/ports-using.html)), áéá ðãñéóóüôãñãð ðëçñïïñßãð ó÷ãóéêÛ ïâ ôç Óõëëïãß ðùí Ports.

### 3.3 Ports Þ ááêÝôá, ôé ðñÝðáé íá ÷ñçóéìððíéÞòù;

[illegible]

## ĐáêÝôá (Ýôïëíà àêôãëÝóéíà)

- [illegible]

## Ports (őçãáßïò êpäéeêáò)

- **Έξαιρούσά θνιράνιιρα** θύι αδέειιιρ άάέάθΰόάόθ. (Όά θάέΎόά όύιθούθ ίάόάέυόόθίόάέ ίά όέό θνιιάδέέάιΎίίάό αδέείιιΎό). ίά όά ports ίθιιιάθά ίά θνιόάνιυόάόά έέΰθιιιό αδέείιιΎό, υθού όύί ίάόάέθόόόόθ θνιυόάόύι ανένυιΰόύι, θ άέέάαθ όύό θνιιάδέέάιΎίίό έΎόόθ άάέάθΰόάόθ.
- **Ίθιιιάθά ίά άΰέάόά όέό άέέΎό όάό άέέάΎό** (patches) άί όι άδέέθιιιάόά.

[illegible]

#### 4 ΑέεΒίçç ôĩõ ÓóóôΠιάôĩò: Ðĩõ άβιάέ ôá run-levels;

Οι Linux ÷ ηςοείηδιέαβ οι όγούγια âêβίςοςδ SysV, âη οι FreeBSD ÷ ηςοείηδιέαβ οι δανάαιόεαεη όγούγια âêβίςοςδ BSD. Οι όγούγια init(8) όγιθ BSD, ââι οδÜñ÷ιθι run-levels, ιγθα οι âñ÷âβι /etc/inittab. Αίθβ âέα αδοÜ, ç âêβίςος âeYâ÷âδαé αδñ Ýíâ script âêβίςοςδ, οι rc(8). Το script /etc/rc âέαÜÜæâé οι âñ÷âβι /etc/defaults/rc.conf êâé οι âñ÷âβι /etc/rc.conf âέα íâ êâèñβθαé διέαδ οδçñâοβâδ θñùêâéοâé íâ íâêéñβθιθι. Íê οδçñâοβâδ αδοÝδ íâêéñβíâ íâ οçí âêóÝêâος οñι áíθβθιθι÷ùι script âêβίςοςδ θιθ âñβέñíθαé οθιθδ êáδαéüñθιθδ /etc/rc.d/ êâé /usr/local/etc/rc.d/. Óâ scripts αδοÜ âβíâé δâññüíêá íâ óâ scripts θιθ âñβέñíθâé οθιñ êáδÜêññ /etc/init.d/ óâ οδóδβιáόâ Linux.

Ἀέάββ ὀδῦñ÷ῖοι ἄγρ ὀδιῖῖῖῖῖῖῖ Ἀέά ὀά scripts Ἀέῖῖῖῖῖῖ ὀυῖ ὀδῖῖῖῖῖῖῖ; Ὀά scripts ὀῖῖ Ἀñῖῖῖῖῖῖῖ ὀῖῖῖ ἑῖῖῖῖῖῖῖ /etc/rc.d/ Ἀῖῖῖῖ Ἀέά Ἀῖῖῖῖῖῖῖῖῖ ὀῖῖ Ἀῖῖῖῖῖῖ ὀῖῖ “Ἀῖῖῖῖῖῖ” ὀῖῖῖῖῖῖῖ. (Ἀέά ὀἈñῖῖῖῖῖῖῖ, ὀῖῖ cron(8), sshd(8), syslog(3), ἑῖῖ ῖῖῖῖῖῖῖῖῖ). Ὀά scripts ὀῖῖ Ἀñῖῖῖῖῖῖῖ ὀῖῖῖ ἑῖῖῖῖῖῖῖῖ /usr/local/etc/rc.d/ Ἀῖῖῖῖ Ἀέά Ἀῖῖῖῖῖῖῖῖῖ ὀῖῖ ῖῖ÷ῖῖῖ Ἀῖῖῖῖῖῖῖῖῖῖῖ Ἀῖῖ ὀῖῖῖ ÷ñῖῖῖῖῖῖ, ῖῖῖῖ Ἀέά ὀἈñῖῖῖῖῖῖῖ ῖ **Apache**, ὀῖ **Squid**, ἑ.ἑ.ῖ.

Διέα ἀβιάες ἡ ἀεάωνῦ ἰαδάντῳ οἷο “ἀαόεεῖ” ὁδὸδΠιάδῳ ἐάε οὐὶ ἀσάνῖαῖ ÷ ñPόδς; Οἱ FreeBSD αἰάδὸγὸσᾶσᾶε ὑὸ ὕῖα δῆPῖαδ ἐαέδῖοῖῖαεῦ ὀγὸδῖα. Ἰᾶ Ὑεᾶ εὐαᾶ, ἰ δῖοPῖαδ, ἰε ἀαᾶεῖPᾶδ οἷο ὁδὸδΠιάδῳ, ἰε ἀαόεῖYδ αἰδῖεYδ (userland, δᾶ δῖῖᾶῖὙἰαδᾶ ὕδῳ δῖ ἰs(1), cat(1), cp(1) ἐῖδ.), αἰάδὸγὸσῖῖᾶε ἐάε ἀῖῖῖῖᾶῖῖᾶε ἰᾶᾶP, ὑὸ ὀγῖῖ. Ἀδῳ αἰάδYῖᾶσᾶε ἐάε ὑὸ “ἀαόεῦ” ὀγὸδῖα. Ἰε ἀσάνῖᾶYδ δῖο ἀᾶᾶεPῖῖᾶῖᾶε ᾶδῳ οἷδ ÷ ñPῖῖᾶδ, ᾶἰ ᾶPῖῖῖ ὀῖ “ἀαόεῦ” ὀγὸδῖα, ἐάε δYῖῖᾶδ ᾶβᾶε ᾶᾶ δᾶῖὙᾶᾶἰ ἰ **Apache**, οἱ **X11**, ἰ **Mozilla Firefox**, ἐῖδ. Ἀδῳ οἷο ᾶβᾶῖδ ἰε ἀσάνῖᾶYδ, ᾶἰῖῖὙ ᾶᾶᾶεPῖῖᾶῖᾶε ἰᾶ δς ÷ ñPδς ὁδς ὈδῖῖᾶPδ ΔᾶῖYῖὙ ἐάε Ports (article.html#SOFTWARE) οἷο FreeBSD. Ἀᾶ ἰᾶ ἰᾶ ÷ ῖῖᾶῖῖ ᾶδῳ οἱ ὁδῖῖῖ “ἀαόεῦ” ὀγὸδῖα, ἰε ἀσάνῖᾶYδ ÷ ñPόδς ὀῖPῖὁ ἀᾶᾶεPῖῖᾶῖᾶε ὀᾶ ὁδῖᾶὀᾶεῖᾶῖδ οἷο /usr/local/. ὀῖ ὀᾶ ᾶῖὀᾶῖὀᾶ δῖῖᾶῖὙᾶᾶ οὐὶ ÷ ῖῖὀῖ ᾶῖὀῖῖᾶε ὀῖPῖὁ ὀῖῖ ἐᾶὀῖᾶῖ /usr/local/bin/, ὀᾶ αἰὀὀὀῖ ÷ ᾶ ᾶῖ ÷ ᾶᾶ ῖὀῖὀᾶῖ οἷδ ὀῖῖ ἐᾶὀῖᾶῖ /usr/local/etc/, ἐ.ἰ.ἐ.

[illegible]

Οἱ ἀεὺεῖρεῖ ἀδὺοδᾶοῖᾶ ἀδὺ οἱ ἀν÷ᾶβι /etc/rc.conf ἀἰᾶᾶᾶᾶᾶᾶ ὁᾶ ὀδᾶᾶᾶᾶ sshd(8) ἐᾶε οἱ **Apache 2.2**. Ἀδᾶᾶᾶ ᾶᾶᾶᾶᾶᾶ ὡεῖ ἰ **Apache** ἐᾶ ἰᾶᾶᾶᾶᾶ ἰᾶ ἀἰᾶᾶᾶᾶᾶᾶ Ἰᾶ ὁᾶ ᾶᾶᾶᾶᾶᾶᾶᾶ SSL.

```
# enable SSHD
sshd_enable="YES"
# enable Apache with SSL
apache22_enable="YES"
apache22_flags="-DSSL"
```

Ἄδῡ ὁϙ ὀόεαιῖP ḑiō iéá ὀδϙñáḑá áíáñáĩḑiēéçéåḑ ὀḑi áñ÷ḑḑi /etc/rc.conf, ðĩñáḑḑá íá ὁϙi íáééiῖPḑáḑḑá ḑḑḑéåḑḑḑ  
 ḑḑḑ ὁϙ ḑñáñῖP áíḑiēῖP (÷ũñḑḑ íá ÷ñáéÜæḑḑé íá ḑḑáíáéééiῖPḑáḑḑá ḑi ὀýḑḑḑiá ḑḑḑ):

```
# /etc/rc.d/sshd start
```

Áí íéá òðçñáòßá ááí Ý ÷ áé áíáññäíðíéçéáß óóí áñ ÷ áßí áóòü, ìðíñáßòá íá áíáíááéÚóáòá ôçí áêêßíçòç ôçò áðü ôçí áñáñíP áíòíèþí íá ôçí áðééñáP forcestart:

```
# /etc/rc.d/sshd forcestart
```

## 5 Ñýèìéóç Äéeôýĩõ

## 5.1 ÄéåđáöÝò Äéeôýĩõ

Άϊὸβ ἁέα ὀϊ ἁαίεῦ ἁίἁἁῖῖῖῖῖῖῖ ὀϣῖῖῖ *ethX* ῖῖῖ ÷ῖῖῖῖῖῖῖῖῖ ὀῖ Linux ἁέα ὀῖῖ ἁίἁἁῖῖῖῖῖῖῖ ἱέαῖ ἁέαῖῖῖῖῖ ἁέαῖῖῖῖῖ, ὀῖ FreeBSD ÷ῖῖῖῖῖῖῖῖῖ ῖῖ ἁίἁἁῖῖῖῖῖῖῖ ὀῖ ῖῖῖῖ ὀῖῖ ῖῖῖῖῖῖῖῖῖ ῖῖῖῖῖῖῖῖῖ ῖῖῖῖῖῖῖῖῖ ἁῖῖῖῖῖῖῖῖῖ ἁῖῖ ῖῖῖ ἁῖῖῖῖῖῖῖῖῖ. Ç ἁῖῖῖῖῖῖῖ ῖῖῖῖῖ ἁῖῖ ὀῖῖ ἁῖῖῖῖῖῖῖῖῖ *ifconfig(8)* ἁῖῖῖ÷ῖῖῖ ἁῖῖ ῖῖῖῖῖῖῖ ἁῖῖῖῖῖῖῖῖῖ Intel® Pro 1000 ῖῖ ἁίἁἁῖῖῖῖῖῖῖῖῖῖῖ *em0* and *em1*):

```
% ifconfig
em0: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    options=b<RXCSUM, TXCSUM, VLAN_MTU>
    inet 10.10.10.100 netmask 0xffffffff broadcast 10.10.10.255
    ether 00:50:56:a7:70:b2
    media: Ethernet autoselect (1000baseTX <full-duplex>)
    status: active
em1: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    options=b<RXCSUM, TXCSUM, VLAN_MTU>
    inet 192.168.10.222 netmask 0xffffffff broadcast 192.168.10.255
    ether 00:50:56:a7:03:2b
    media: Ethernet autoselect (1000baseTX <full-duplex>)
    status: active
```

## 5.2 Ἡοὐβόαεὸ Ἀεῖοεῖοαὐί IP

Ἡοὐβόαεὸ ἰά ἰάεὶ Ὑοῖοἰ ἰεῖ ἡεῖοεῖοίς IP ὁἰ ἰεῖ ἡεῖοεῖο ἡεῖοεῖο ἰᾶ ὁε ÷ ἡπόε ὁεὸ ἰοῖεῖο ifconfig(8). Ἀεῖ ἰᾶ ἡβῖᾶε ἡῖεῖο ὡοῖοἰ ἡοῖο ε ἡεῖᾶᾶ, ἡεῖ ἰᾶ ἰεῖ ÷ Ὑῖᾶᾶε ὁἰ εὙεᾶ ἡῖᾶῖεῖβῖος, ἡᾶ ὁἡῖᾶε ἰᾶ ὁεῖ ὁἡῖεῖὙᾶᾶᾶ ὁῖ ἡᾶ ÷ ἡᾶῖ /etc/rc.conf. Ὀῖ ἡεῖοεῖοῖ ὁἡὙᾶῖᾶ ὁᾶῖᾶᾶε ε ἡᾶᾶ ÷ ἡᾶᾶ ὁῖ ὁἡῖεῖᾶᾶὙῖᾶ ὁἰ ὡᾶᾶ ὁῖ ὁῖῖᾶεῖοᾶ (hostname), ὁεῖ ἡεῖοεῖοίς IP, ἡεῖο ἡεῖ ὁεῖ ὁἡᾶῖεῖᾶᾶᾶῖῖ (defaultrouter):

```
hostname="server1.example.com"
ifconfig_em0="inet 10.10.10.100 netmask 255.255.255.0"
defaultrouter="10.10.10.1"
```

× ἡοῖῖὁῖεῖοᾶ ὁεῖ ἡεῖοεῖοεῖ ἡᾶᾶ ÷ ἡᾶᾶ ἡεῖ ἰᾶ ἡεῖῖᾶᾶᾶ ὡῖ ἰεῖ ἡεῖοεῖο ἡᾶ ἡᾶᾶὙῖᾶ ἡοὐβόαεὸ ἰῖᾶ DHCP:

```
hostname="server1.example.com"
ifconfig_em0="DHCP"
```

## 6 Firewall

Ὀῖ Linux ÷ ἡοῖῖὁῖεῖᾶᾶε ὁἰ **IPTABLES** ὁἰ ἡῖᾶᾶ ὁἡῖ ÷ ἡε ὁῖᾶᾶᾶᾶ firewall ὁἰ ἡῖᾶᾶᾶ ὁῖᾶᾶ. Ὀἰ FreeBSD ὁἡῖ ÷ ἡε ἡῖᾶᾶ firewall ἰῖᾶ ὁῖ ὁῖᾶᾶ. Ἀεῖ ὁεῖ ἡεῖᾶᾶ, ὁἰ FreeBSD ὁἡῖ ÷ ἡε ὁἡᾶ firewalls:

- IPFW (http://www.FreeBSD.org/doc/el\_GR.ISO8859-7/books/handbook/firewalls-ipfw.html)
- IPFILTER (http://www.FreeBSD.org/doc/el\_GR.ISO8859-7/books/handbook/firewalls-ipf.html)
- PF (http://www.FreeBSD.org/doc/el\_GR.ISO8859-7/books/handbook/firewalls-pf.html)

Ὀἰ **IPFW** ἡ **IPFW** (ε ἡῖᾶᾶ ÷ ἡεῖοῖῖ ὡἰ ἡᾶῖᾶ ὁῖ **IPFW** ἡῖᾶε ε ipfw(8)) ἡῖᾶε ὁἰ firewall ὁῖ Ὑ ÷ ἡε ἡᾶᾶ ÷ ἡᾶ ἡε ὁῖᾶᾶᾶ ἡᾶ ὁεῖ ἡᾶ ἡᾶᾶ ἡᾶᾶᾶᾶ ὁῖ FreeBSD. Ὀἰ **IPFW** ἡῖᾶᾶ ἰᾶ ὁῖᾶᾶᾶᾶ ἰᾶ ὁἰ dummynet(4) ἡεῖ ἰᾶ ὁἡῖ ÷ ἡε ἡῖᾶᾶᾶᾶ ἡεῖᾶᾶᾶᾶ ὁε ἡῖᾶᾶ ὁἡῖᾶᾶ (traffic shaping) ἡεῖ ἰᾶ ἡᾶῖᾶᾶ ἡεῖᾶᾶᾶᾶ ὁῖᾶᾶ ὁῖᾶᾶᾶ ἡεῖᾶᾶᾶ.

ὁἡὙᾶῖᾶ ἡῖᾶ ἡᾶῖᾶ ὁῖ **IPFW** ὁῖ ἡῖᾶᾶᾶ ἡεῖᾶ ÷ ὡᾶᾶ ἡᾶᾶᾶᾶ ὁἰ ὁῖᾶᾶ ὁεῖ ὁῖᾶᾶᾶ **SSH**:

```
ipfw add allow tcp from any to me 22 in via $ext_if
```

Ôi **IPFILTER** áðíáé íéá áóáñííáP firewall ðíó áíáððýóóáðáé áðú ôíí Darren Reed. Äáí Ý÷-áé öðéá÷ðáß áéáéêÜ áéá ôí FreeBSD, éáé Ý÷-áé íáðóáññéáß éáé óá Üëéá éáéðíðñáéêÜ, óðíðñáééäíááííÝíúí ðúi NetBSD, OpenBSD, SunOS, HP/UX, éáé Solaris.

ĐaňŮääēāiā áíüò éáíuíá āéá ôi **IPFILTER** ðĩō āđéōñÝđāē āéóāñ÷:üiāiā āāāñÝiā ðñiò ôçí òđçñāóBā **SSH**:

```
pass in on $ext_if proto tcp from any to any port = 22
```

Ç òàèãòòàáá àòàñìràP firewall, òì **PF**, áíáðóýóóòòáé áðü òì OpenBSD project. Ôì **PF** àçìéròñãPèçèà ùò áíòèéáòáóòÜòçò òìò **IPFILTER**, èáé Ýóóé ç óýíóáç òìò **PF** àáíáé àñèàòÜ ðañüüíèá íá áóòP òìò **IPFILTER**. Ôì **PF** ìðññáá íá óóíáòáóóòáá íà òì altq(4) áéá íá ðánÝ ÷ áé òðçñáóáòò óýðìò QoS.

ĐánÜäåēāiā êáíuíá ôiō **PF** ðiō ãđéônÝđăé áéoăñ÷ùiăiá äăăiñÝiá đñiò ôçí òđçñăóăá **SSH**:

```
pass in on $ext_if inet proto tcp from any to ($ext_if) port 22
```

## 7 Άίαâáèìβæïĩôáò ôï FreeBSD

ÖðÜñ÷ïïï ññáéð ìÝëïäïë áéá ôçï áíááÜëïéóç áñüð öööðPiáðïrö FreeBSD: ÌÝóù òïð ðçááßïrö êpáééá, ìÝóù Ýðïëüï (binary) áíáááèìßóáñí, êáé ìÝóù öüï CD äãêäðÜóóáóçð.

Ç äæäðÛððáðç ìÝóù òìð ðçäâìð òðäéä äâìäé ç ðér ðìèýðèìèç, äæÛ ðñìòóÝñäé éäé òç ìääæýðäñç äðìäðP äðäéèìâä. Ç äéääéäðâä äððP ðäñééäìäÛìäé òì òðä÷ñìéòìù òìð òìðéèèý áìðéäñÛìòì òìð ðçäâìð òðäéä òìð FreeBSD ìä òìí òðäéä òìð FreeBSD ðìò äñððéäðäé òðìð äìððçñäðçÝð CVS (Concurrent Versioning System). Äðù òç òðéäìP ðìò òì òìðéèù áìðâñäðì ðçäâìð òðäéä äâìäé äìäìäùÝñì, ìðñìâðâä ìä ìäðäæùððððâððä ìÝäð äæäùäæð òìò ððñPìä éäé òùì ääðéèPì ðñìäñäìÛðùì. Äéä ðäñéòóùðäñäð ðççñìòìñâð ò÷÷äðéèÛ ìä òì óýððçìä äìäâÛèìéòçð ìÝóù ðçäâìð òðäéä, äâððä òì èäðÛèäéì ÄìçìÝñòóç éäé ÄìäâÛèìéòç ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/updating-upgrading.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/updating-upgrading.html)) òðì Ää÷äéñâäéì òìò FreeBSD.

Iε Υδιειάο (binary) αίαάαειβόαέο, αβίαέ δάνυιειάο ιά ος ÷ñΠός οςο αίοτρεΠο yum P apt-get αέα οςι αίαάΥειέος αίυο  
 οοόοΠιάοτδ Linux. Ç αίοτρεP freebsd-update(8) έα έαόάΥόαέ οέο αίαάαειβόαέο έαέ έα οέο αάέαόάοόΠόαέ. Ιδñαβόα ίά  
 έαεñβόαόα όςι αόδύιαιός, αίΥ όαέôΥ έέαόόΠιάό αέοΥέαός οςο, ιά ος ÷ñΠός οίτ cron(8).

**Όγιὰβυός:** Αί δñüēάέόάέ íá ÷ ñçóέííðíéΠάάðά ðí cron(8) áέά ðñĩāñáííáðέόéÝíäð áíáááèíßóáέó, ááááéüèáßðá üóé ÷ ñçóέííðíéáßðá όγι áíðíēΠ freebsd-update cron όðí áñ÷:áßí crontab(1) áέά íá áέä÷:έóóíðíéçέáß ç ðέéáíüðçóä íá áßíáóáέ áíáíÝüόç όγι Βάέä óóéáìΠ áðu Ýíá íäåÜēí áñέèíü íç÷:áíçÜðüí.

```
0 3 * * * root /usr/sbin/freebsd-update cron
```

Ç 0âæã0ôáßá áðéeĩāP áíááÛèíéóçð, ìÝòù òùì CD âæáoÛóóáoçð, âßíáé áñêáoÛ íæèÛeáñç. Áðèðò æêééìPóðâ áðü òì  
 CD âæáoÛóóáoçð éáé áðéeÝíòâ òçì áíòßòíé÷ç áðéeĩāP áíááÛèíéóçð (upgrade).

**8 procfs: ĐăñáóìÝĩ áëëÜ ü÷é Îă÷áóìÝĩ**

Óôî Linux, èà ÷ñàéáôâß íá äâßôâ ôî /proc/sys/net/ipv4/ip\_forward áéá íá èâèññóáôâ áí âíáíé áíâññîðéçíÝíc ç ðñîèèçóç IP (IP forwarding). Óôî FreeBSD èà ðñÝðáé íá ÷ñçóéíððéóóáôâ ôî sysctl(8) áéá íá äâßôâ

ἀόδῖ ἐὰς Ὑεῖαδὸ ἡδὲβόαέδ οἷο ὁδὸδῖαδῖο, ἐὰεῖδὸ οἷ procfs(5) ἐὰῦἡἡβόαέ δᾶἡῦ÷çìÝîí ὁᾶ δἡῦὁᾶᾶδὸᾶ ἀεῖῦὁᾶέδ οἷο ἐᾶέδῖῖἡἡἡἡἡ. (Αἷ ἐὰς ç ἰῖῖῖῖῖ sysctl ἡβῖᾶέ ἡδῖόçδὸ ἀέᾶέÝῖἡἡç ἐὰς ὁἷ Linux).

Ὀἷ δᾶἡὙᾶἡᾶἡᾶ ὁçδὸ δἡἡῖῖῖῖῖῖ IP, ἐᾶ ÷ἡçῖῖῖῖῖῖῖῖῖῖ ὁçῖ ἡἡῖῖῖῖῖῖ ἰῖῖῖῖῖ ἡᾶ ἰᾶ ἡᾶἡἡῖῖῖῖῖῖ ἰᾶ ç ἡῖῖᾶὁῦὁçὁᾶ ἡὁὁῖ ἡβῖᾶέ ἰᾶἡἡἡῖῖῖῖῖῖῖῖῖῖῖ ὁᾶ Ὑῖᾶ FreeBSD ὁῖὁὁῖᾶ:

```
% sysctl net.inet.ip.forwarding
net.inet.ip.forwarding: 0
```

Ç ἡἡἡῖῖῖῖῖ -a ÷ἡçῖῖῖῖῖῖῖῖῖῖ ἡᾶ ἰᾶ δῖῖῖῖῖῖῖ ἰᾶ ἡῖὁᾶ ἰᾶ Ὑῖᾶδὸ ὁἡδὸ ἡἡἡῖῖῖῖῖῖῖῖῖῖῖ ὁἷο ὁδὸδῖᾶὁἷο:

```
% sysctl -a
kern.ostype: FreeBSD
kern.osrelease: 6.2-RELEASE-p9
kern.osrevision: 199506
kern.version: FreeBSD 6.2-RELEASE-p9 #0: Thu Nov 29 04:07:33 UTC 2007
root@i386-builder.daemonology.net:/usr/obj/usr/src/sys/GENERIC

kern.maxvnodes: 17517
kern.maxproc: 1988
kern.maxfiles: 3976
kern.argmax: 262144
kern.securelevel: -1
kern.hostname: server1
kern.hostid: 0
kern.clockrate: { hz = 1000, tick = 1000, profhz = 666, stathz = 133 }
kern.posix1version: 200112
...
```

**Ὀçῖᾶῖῖῖῖῖ:** ἘὙὁἷᾶδὸ ἡὁὙ ὁἡδὸ ὁἡἡὙὁ δῖῖῖ ἡᾶῖῖῖῖῖ ç ἰῖῖῖῖῖῖ sysctl ἡβῖᾶέ ἰῖῖῖ ἡᾶ ἰᾶὙᾶἰῖῖῖῖῖῖ.

ὈδῖὙἡ÷ἡῖῖ δᾶἡἡὁὁὁὁᾶἡὁ Ὑὁἷὁ ἡδᾶἡὁᾶῖὁᾶ ὁἷ procfs, ὙὁὙὁ ἡᾶ δᾶἡὙᾶἡᾶἡᾶ Ὑὁᾶἷ ἡἡὁᾶἡᾶῖὁᾶ δᾶἡἡὁᾶἡῖ ἡἡᾶἡἡἡἡἡ, ὁἷ ἡὁἡἡἡ ἡὙἡᾶἡ ÷ἡῖὁç ὁçδὸ ἰῖῖῖῖῖῖῖ truss(1) ἡᾶ ὁçῖ ἰῖῖῖῖῖῖῖῖῖ ὁἷ ἡἡὁᾶἡῖ ὁδὸδῖᾶὁἷο, ἐὰς ἡᾶ ὁçῖ Ὀὁἰᾶᾶὁὁὁçὁᾶ ἰᾶ ἈἡὁᾶἡὙὁἡἡ ὁἷο Linux ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/linuxemu.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/linuxemu.html)). (Αἷ ἐὰς ç Ὀὁἰᾶᾶὁὁὁçὁᾶ ἰᾶ ἈἡὁᾶἡὙὁἡἡ ὁἷο Linux ÷ἡçῖῖῖῖῖῖῖῖῖῖ ὁἷ ἡἡἡὁ ὁçδὸ procfs, ὁἷ linprocfs(5)). Αἷ ÷ἡᾶἡὙᾶᾶᾶᾶ ἰᾶ δἡἡὁᾶἡὁὁὁὁᾶ ὁἷ procfs, ἡὁἡᾶῖὁᾶ ἰᾶ δἡἡὁἡὙὁᾶᾶ ὁçῖ ἡἡῖῖῖῖῖῖῖ ἡᾶἡᾶᾶὁὁ ὁἷ ἡἡ÷ᾶἡἡ /etc/fstab:

```
proc                /proc                procfs    rw,noauto            0                0
```

**Ὀçῖᾶῖῖῖῖῖ:** Ç ἡἡἡῖῖῖῖῖ noauto ἐᾶ ἡἡἡᾶῖὁᾶ ὁçῖ ἡὁὁὙἰᾶὁç δἡἡὁὙἡὁçὁç ὁἷο /proc ἡᾶὁὙ ὁçῖ ἡἡἡῖῖῖῖῖῖ ὁἷο ὁδὸδῖᾶὁἷο.

δἡἡὁᾶἡὁὁὁᾶ ἡᾶὁὙὁἡἡ ὁçῖ procfs ÷ἡçῖῖῖῖῖῖῖῖῖῖ ὁçῖ ἡἡῖῖῖῖῖῖῖ ἰῖῖῖῖῖῖ:

```
# mount /proc
```

## 9 ÓôίϗέέôìÝíâò ÁíôïëÝò

### 9.1 Äéá÷âβñέόϗ ÐáëÝòùí

ÁíôïëP ôïò Linux (Red Hat/Debian)	Áíôβóôïë÷ç áíôïëP FreeBSD	Óëïðüò
<code>yum install package / apt-get install package</code>	<code>pkg_add -r package</code>	ÄãéáôÜóóáόϗ ÐáëÝòïò áðü áðñáéñòóìÝíñ áïòçñáòçòP
<code>rpm -ivh package / dpkg -i package</code>	<code>pkg_add -v package</code>	ÄãéáôÜóóáόϗ ÐáëÝòïò
<code>rpm -qa / dpkg -l</code>	<code>pkg_info</code>	Ëβóóá äãéáôáóóçÝíñí ÐáëÝòùí

### 9.2 Äéá÷âβñέόϗ ÓóóôPíáôïò

ÁíôïëP Linux	Áíôβóôïë÷ç áíôïëP FreeBSD	Óëïðüò
<code>lspci</code>	<code>pciconf</code>	Ëβóóá óóóêãðí PCI
<code>lsmod</code>	<code>kldstat</code>	Ëβóóá ôñòòùíÝíñí áñëññìÜòùí ðòñPíá
<code>modprobe</code>	<code>kldload / kldunload</code>	Öññòòóϗ/Áðñüññòòóϗ áñëññìÜòùí ðòñPíá
<code>strace</code>	<code>truss</code>	Áíβ÷íáòóϗ êëPóáñíí óóóôPíáôïò

## 10 ÓôïðãñÜóíáóá

Äóäêðéóôíγíä üòé áòòü ôí êäβíññí óáò ðáññâ÷â áñëáòÝò ðëçññíññâò ãéá íá íäééíPóáôâ íä ôí FreeBSD. Äéá ðáñéóóüðáñâò éáé ðëí êäðòññññâò ðëçññíññâò, ðáñáéáéíγíä íá äéáäÜóáôâ ôí Äã÷áéññäéí ôïò FreeBSD ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/index.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/index.html)) ôí ïðññí áðβόçò ðáñéÝ÷áé éáé ðñëëÜ èÝíáóá ðñò äáí éáéγòèçéáí éáëüëïò óôí ðáññíí êäβíññí.